Application Number 09/907,230
Amendment responsive to final Office Action mailed June 6, 2006

REMARKS

This Amendment is responsive to the final Office Action dated June 6, 2006. Applicants have amended claims 1-4, 6, 9, 13, 15-19, 21, 23-29, 31, 33, 34 and 38. Claims 1-4, 6, 8-31 and 33-38 remain pending.

Claim Objections

In the Final Office Action, the Examiner objected to claims 24-28 because they refer to "the data storage device of claim 23". These claims have been amended to properly refer to the computer-readable medium of claim 23, and not a data storage device.

Claim Rejection Under 35 U.S.C. § 101

In the Final Office Action, the Examiner rejected claims 1-4, 6, 8-31 and 33-38 under 35 U.S.C. 101 as lacking patentable utility. In particular, the Examiner indicated that the claims recite a method of preventing creation of unauthorized and accessible copies of a medium, but stated that the claims appear to teach a method in which authorized and accessible copies are created. Applicants disagree.

The claims, as formerly presented, did not recite a method in which authorized and accessible copies are created. On the contrary, the second medium created in the method is inaccessible insofar as it includes a second access key that is modified relative to the access key that facilitates access to the digital content on the first medium.

In order to further clarify this point, Applicants have amended all pending independent claims to specifically recite that the second access key renders the second medium inaccessible. The features of the claims are clearly consistent with the preamble and provide utility in preventing the creation of unauthorized and accessible copies of a medium.

First Claim Rejection Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claims 1-4, 6, 8-31 and 33-38 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements. This rejection seems to be based on the same misunderstanding addressed above with respect to the rejections under 35 U.S.C. 101. In particular, the Examiner indicated that the claims recite a

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method of preventing creation of unauthorized and accessible copies of a medium, but stated that the claims appear to teach a method in which authorized and accessible copies are created.

Again, Applicants disagree, and submit that the claims, as formerly presented, did not recite a method in which authorized and accessible copies are created. On the contrary, the second medium created in the method is inaccessible insofar as it includes a second access key that is modified relative to the access key that facilitates access to the digital content on the first medium.

As noted above, Applicants have amended all pending independent claims to specifically require that the second access key renders the second medium inaccessible, which should make this issue clear to the Examiner. Accordingly, the features of the claims are consistent with the preamble and do not omit any essential elements regarding the prevention of creation of unauthorized and accessible copies of a medium.

Second Claim Rejection Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claims 1-4, 6, 8-31 and 33-38 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner stated that the phrase "due to the application of the error correction information to the uncorrected data" refers to the "modifi[cation] relative to the access key" or the "facilitat[ing] access to the digital content on the medium".

Applicants respectively submit that a person of ordinary skill in the art would easily recognize that the phrase "due to the application of the error correction information to the uncorrected data" refers to the modification of the second access key relative to the access key that facilitates access to the digital content on the first medium. The phrase in question only makes sense in this context, and therefore a person of ordinary skill in the art would have no difficulty ascertaining the meaning and scope of the claims.

Nevertheless, in order to advance prosecution, Applicants have amended the independent claims to address the Examiner's concerns. In particular, the claims have been amended to clarify that the modification of the second access key is due to the application of the error correction information to the uncorrected data. This issue should now be moot.

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Third Claim Rejection Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claims 1-4, 6, 8-31 and 33-38 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner objected to the phrase "the medium" and indicated that the claims recite both a medium and a second medium.

For this rejection, Applicants again feel that a person of ordinary skill in the art would have no difficulty understanding the terms medium and second medium, and that every occurrence of "the medium" does not refer to the second medium.

In any case for purposes of advancing prosecution, Applicants have amended the claims to clarify this issue and address the Examiner's concerns. The claims now recite a first medium and a second medium, and the Examiner's objections to the phrase "the medium" should be moot.

Fourth Claim Rejection Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claims 33-34 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner stated that Applicants refer to "the access key", but noted that Applicants' claimed invention calls for two access keys.

Once again, Applicants respectively submit that a person of ordinary skill in the art would have no difficulty understanding that the access key recited in claims 33 and 34 refers to the access key that facilitates access to the digital content on the first medium and not the second access key recited in independent claim 29. Nevertheless, in order to advance prosecution of the application, Applicants have amended claims 33 and 34 to clarify this issue and address the Examiner's concerns in these claims. These claims are now consistent with many of the other claims. Claims 33 and 34 now refer to the two different access keys as: 1) the access key that facilitates access to the digital content on the first medium and 2) the second access key.

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Claim Rejection Under 35 U.S.C. § 102

In the Final Office Action, the Examiner rejected claims 1-4, 6, 8-10, 12, 14-31 and 35-38 under 35 U.S.C. 102(e) as being anticipated by Sims (US 6,438,235). Applicants respectfully traverse these rejections to the extent such rejections may be considered applicable to the amended claims. Sims fails to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features.

Applicants' claimed invention is directed to purposely including errors in the error correction information of an access key. The access key, as claimed, includes both uncorrected information and error correction information that includes the errors. The access key facilitates access to digital content on a medium.

However, when the digital content and the access key is copied to another medium, then the erroneous error correction information is applied so that a "corrected" second access key copied to the second medium is modified relative to the original access key that facilitates access to the digital content on the source medium. This modification to the second access key is due to the application of the error correction information of the uncorrected data when the access key is copied, and generally produces the second access key in a modified form. However, the copied digital content on the new medium, then, will be inaccessible insofar as the second access key is modified from the original access key and, therefore, unable to be used as an access key. A user, for example, would have no way to know the second access key, making it impossible for a user to access the digital content. Furthermore, the second access key produced and stored on the second medium during the copy process may not match stored keys necessary to cryptographically unlock the digital content.

Sims fails to disclose or suggest an access key that includes uncorrected data and associated error correction information, wherein the error correction information of the access key includes one or more errors. According to claim 26 of Sims (which was cited in the Office Action by the Examiner), the access key itself is stored as errors in the error correction code. Thus, in Sims, the digital data (not the key) is "corrected" by the access key encoded in the error correction code. In Sims, the access key itself does not include uncorrected data and associated

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error correction information, and error correction is never performed with respect to uncorrected data of the access key to generate a second access key, as recited in Applicants' claims.

The distinctions between Sims and the claimed invention are very important. In Sims, information stored in protected area 101 (the cryptographic keys) are <u>encoded as errors</u> in the information stored in unprotected area 102. According to claim 26 of Sims, in particular, these cryptographic keys are specifically encoded as errors in an error correction code.

In contrast, the claimed invention requires an access key that itself includes both uncorrected data and associated error correction information. The error correction information of the access code is encoded with errors so that application of the error-laden error correction code to the uncorrected data of the access key cause generation of a new access key (the second access key) that renders the copied medium inaccessible. Thus, Sims <u>encodes cryptographic keys as errors</u>, whereas the claimed invention <u>encodes an access key *with* errors</u>. While this distinction may seem subtle from a semantic standpoint, the differences are critical.

In Sims, cryptographic keys are encoded as errors in an error correction code, which is applied to <u>other</u> data (not associated with the key). Thus, insofar as the keys themselves are encoded in the error correction code in Sims, the keys themselves do not include their own error correction information that is applied with respect to the keys. Instead, the keys (encoded as the error correction code) are used to "correct" other data.

Furthermore, in Sims, error correction information is never applied with respect to uncorrected data of a first key in order to generate a second key. Instead, the error correction information (which is the key itself) is applied with respect to other information (which is not the key) in order to correct such other information. Thus, after applying the error correction (which is the key itself), a second key is never created.

Consequently, Sims lacks any suggestion of applying erroneous error correction information of a first key to uncorrected data of the first key to generate a second key. Moreover, Sims also lacks any suggestion of the generation of a second key that renders the copied medium inaccessible. Rather, in Sims, the key (encoded as the error correction code) is applied to correct other data, and after such correction, no key is present in the corrected data.

In short, Applicants' claimed invention requires an access key that includes both uncorrected data (i.e., the data to be used as a cryptographic key) and error correction information

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that includes errors. When copied, the legitimate access key is rendered useless by the erroneous error correction information of the key. Sims lacks these features insofar as the key in Sims itself is encoded as errors in the error correction code of *other* information, i.e., the information being protected. Consequently, the key in Sims does not itself include uncorrected data. Furthermore, since the key in Sims does not include both uncorrected data and error correction information that includes errors, the error correction information is never applied with respect to uncorrected data of the key to generate a new "corrected" key that renders a copied medium inaccessible.

In view of these observations and distinctions, Applicants believe that all pending claims clearly distinguish Sims, and are in condition for immediate allowance. Furthermore, the current clarifying amendments should not raise any new issues and should not require the Examiner to conduct any further search, as the clarifying features added in this Amendment were inherent in the former claims. Accordingly, Applicants respectfully request that the Examiner enter this after-final Amendment and allow all pending claims.

Applicants also thank the Examiner for the favorable comments in the final Office Action regarding the allowable subject matter in dependent claims 13, 33, and 34. Given the comments above, however, Applicants believe the independent claims are currently in allowable form.
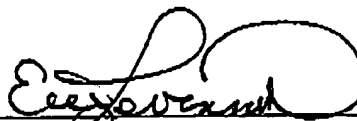
Please charge any additional fees or credit any overpayment to deposit account number 09-0069. In view of the distinctions addressed above between the current claims and the applied prior art, Applicants reserve further comment at this time on any other features of the independent or dependent claims. However, Applicants do not necessarily acquiesce in any of the rejections or the Examiner interpretations of the applied references. Applicants reserve the right to present additional arguments with respect to any of the independent or dependent claims. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date: By:

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